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Roger A. Rennekamp
Extension Health Director

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Improving the Health of the Nation Through Transdisciplinary Community Engagement

Roger A. Rennekamp

Abstract

This article chronicles how three land-grant universities and one non-land-grant university medical center have transformed to meet the needs of people where they live, work, learn, and play. In this article, we first get a glimpse of how an institutional commitment to community engagement and supportive administrative structures are advancing community-based public health practice at Oregon State University. Next, we learn how Texas A&M's AgriLife Extension Service is using community data to focus on the most pressing needs of the state's 254 counties. We then examine how Mississippi State University is working to address the shortage of health care professionals in its state by introducing young people to health careers and encouraging medical students to practice in the state. Finally, we learn how the University of New Mexico Medical Center and New Mexico State University are using the tried-and-true principles of cooperative extension to address the state population's health needs through Health Extension Rural Offices.

Higher education's role in improving the health of the nation dates back more than 250 years to the creation of the United States' first medical school at the University of Pennsylvania in 1765. In the decades to follow, several other private institutions, including Columbia, Harvard, and Dartmouth, also established medical education programs. But it wasn't until the early part of the 19th century that public universities followed suit. Over time, "teaching hospitals" were created to meld medical instruction with clinical care (Slawson, 2012). It wasn't long before universities also became leading sites of biomedical research.

Today, medical education, clinical care, and biomedical research are highly visible components of higher education's contribution to public health. Less visible is community-based work in which faculty and staff collaborate with members of a given community to develop solutions to the community's most challenging health issues. This article introduces readers to an innovative action framework developed by the Cooperative Extension System that can be used by all colleges and universities to improve community health and well-being through authentic, transdisciplinary community engagement.

The Cooperative Extension System

One of the mechanisms by which land-grant universities are working to advance health and well-being is through their respective Cooperative Extension organizations. Established by the Morrill

Act of 1862, these universities have a special covenant with the people of the nation to ensure that their institutional knowledge resources are readily applied toward the purpose of enhancing the public good. The community outreach and engagement mission of these universities was codified by the Smith-Lever Act of 1914. Funds authorized by the Smith-Lever Act continue to be distributed to land-grant universities to help them fulfill this mission.

Often better known for its historic work to promote scientific agricultural practices, the Cooperative Extension System is now fully committed to utilizing its network of more than 3,200 branch offices to advance the health of the nation. Early on, Cooperative Extension's health-oriented work focused heavily on the dissemination of science-based information meant to inform individuals' health choices. Throughout its history, Cooperative Extension has used many different methods to inform and influence these choices, including publications, workshops, and personal counseling.

Without question, there is much that individuals can do on a personal level to improve their health, such as increasing their physical activity and eating healthier meals. Currently, only one in four adults engages in the minimum recommended amount of leisure-time physical activity (Physical Activity Guidelines Advisory Committee, 2018), and only one in 10 meets federal guidelines for fruit and vegetable consumption

(Lee-Kwan et al., 2017). But individuals can only choose among the alternatives available to them. One's ability to make healthy choices is limited or promoted by a complex system of contextual factors. Collectively, these factors are referred to as social determinants of health.

Many social determinants, however, influence health in ways that extend beyond individuals' ability to make healthy choices. For example, a toxic waste site located near a community where the residents are primarily people of color may produce adverse health outcomes that cannot be attributed to individual choice.

But no single organization alone can address the negative impacts of social determinants of health. Consequently, if Cooperative Extension and its affiliated land-grant universities are committed to improving the health status of the nation, they must learn to work in new ways that extend beyond promoting individual behavioral changes.

Toward a New Framework

In 2012, the Extension Committee on Organization and Policy (ECOP) appointed a National Task Force on Health to identify systemwide priorities to guide Cooperative Extension's work in the area of health for the next 3 to 5 years. Approved by ECOP in 2014, Cooperative Extension's National Framework for Health and Wellness (Braun et al., 2014) was instrumental in establishing work in the area of health as a priority for the Cooperative Extension System. It also raised the visibility of Cooperative Extension's health-related work and catalyzed the establishment of new programs, partnerships, and professional development opportunities for staff. This framework, however, stopped short of charting a systemwide pathway for incorporating social determinants of health into Cooperative Extension's historic work focused on promoting healthy behaviors.

Recognizing the need for updated guidance in this area, ECOP appointed a Health Innovation Task Force in 2020 to provide recommendations for system-level change that would further advance Cooperative Extension's health-related work. A subgroup of that task force worked for more than a year to develop Cooperative Extension's National Framework for Health Equity and Well-Being (Burton et al., 2021), which was approved by ECOP in 2021. The updated framework was informed by an examination of major health-related events that have occurred since 2014, changes that have occurred within the Cooperative Extension System

since the development of the original framework, and a review of current literature and best practices in relevant fields.

The updated framework emphasizes three core themes that align with contemporary population health practice: promoting health equity, focusing on social determinants of health, and accomplishing work through community coalitions.

It is also important to note that the updated framework uses the term "well-being" rather than "wellness" to align with terminology being used by the Centers for Disease Control and Prevention (CDC), the Robert Wood Johnson Foundation (RWJF), and Healthy People 2030. For example, Healthy People 2030 has chosen to use "well-being" in association with "health" to reflect individuals' ability to meet personal and collective needs under changing conditions in society (Pronk, et al, 2021). Well-being also aligns more closely with the construct of health-related quality of life (CDC, 2018).

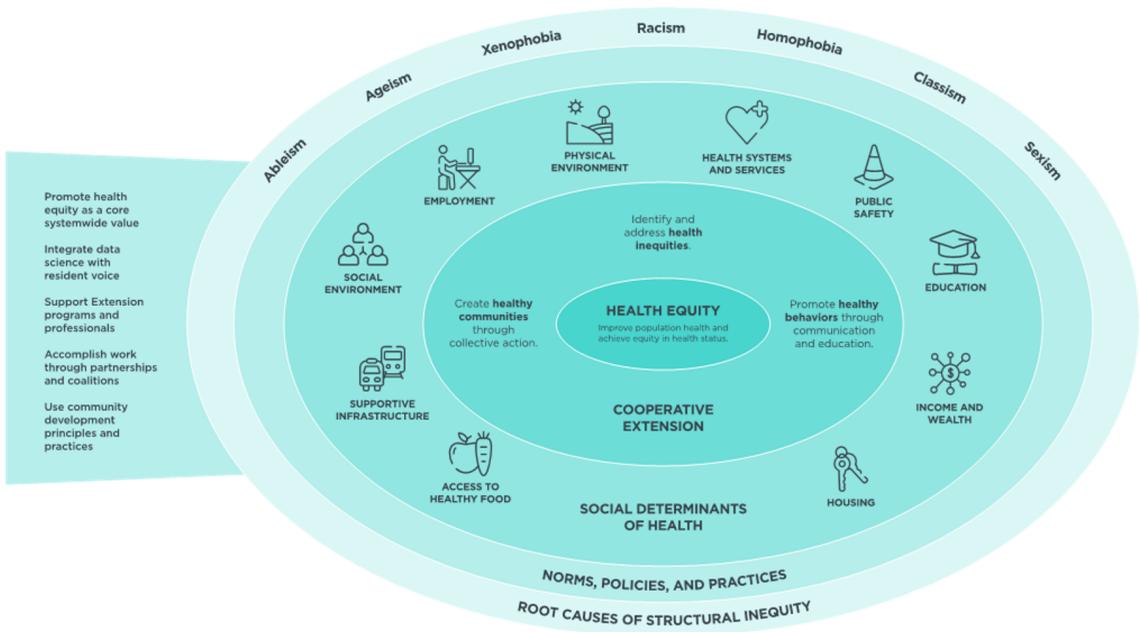
The term "wellness" is typically "used to refer to services aimed at an individual. For these and probably other reasons, practitioners and researchers working with systems and communities use the term well-being" (M. Roulier, personal communication, May 26, 2020). Compared to wellness, the concept of well-being also includes such considerations as how satisfied people are with their lives as a whole, the sense of control they have over their lives, and their sense of purpose in life (New Economics Foundation, 2012). Well-being also entails "being accepted into and belonging to a community, providing and receiving support from others, and acting as a legitimate contributor to a common world" (Secretary's Advisory Committee for Healthy People 2030, 2018, p. 2).

A Framework for Health Equity and Well-Being

Developed specifically for the Cooperative Extension System, the framework described here (Figure 1) can also inform broader efforts by institutions of higher education to develop authentic partnerships with communities to address the root causes of systemic inequities. Those within Cooperative Extension will notice some similarities with the 2014 framework, the most notable of these being the continued use of a multilayered socio-ecological model to show the relationships between individuals and the environments in which they live.

The outer ring of Figure 1 represents some of the many root causes of structural inequity. When decision-makers establish norms, policies, and

Figure 1. Cooperative Extension’s National Framework for Health Equity and Well-Being



practices through a lens of racism, xenophobia, or sexism, some groups may be denied access to assets and conditions that support lifelong health and well-being. In this model, these assets and conditions are depicted as social determinants of health. This framework incorporates the nine social determinants of health identified by the National Academies of Sciences, Engineering, and Medicine (Weinstein et al., 2017). Access to healthy food was added as a 10th determinant because of its centrality to the work of Cooperative Extension.

Cooperative Extension’s work begins with identifying the health inequities that may exist in a given community. The model not only acknowledges Cooperative Extension’s historic efforts to improve health through communication and education but also emphasizes the importance of working with and through coalitions to create healthy communities. The work of these coalitions frequently focuses on addressing the social determinants of health that pose barriers to achieving optimal health.

Together, this work focuses on the dual goals of (a) improving population health and (b) achieving equity in health status. The “five” attached to the left of the ovals in Figure 1 lists the five high-level recommendations that the Cooperative Extension System must implement if it is to be effective in achieving these dual goals:

1. Advance health equity as a core systemwide value to ensure that all people have a fair and just opportunity to be as healthy as they can be.
2. Utilize community assessment processes that integrate data science and resident voice to identify and address health inequities with greater precision.
3. Invest in the success and visibility of Extension’s health-related professionals, programs, and initiatives.
4. Establish partnerships with academic units, universities, government agencies, corporations, nonprofit organizations, and foundations that share a commitment to reducing or eliminating health inequities.
5. Utilize a community development approach to advance the work of coalitions focused on influencing the social determinants of health.

The sections that follow provide the rationale for the development of these recommendations and the theoretical underpinnings of each. The discussions of each recommendation are followed by examples of how various land-grant universities across the nation have already begun to implement the recommendations. These examples were obtained from various contributing authors at those universities.

Make Health Equity a Core Systemwide Value

RWJF defines “health equity” as a condition that exists only when “everyone has a fair and just opportunity to be as healthy as possible (Braveman, 2017). Implied in this definition is the notion that not everyone currently has that opportunity. By establishing health equity as a core systemwide value, Cooperative Extension acknowledges that inequities in health outcomes are more than an unfortunate given and makes a public commitment to addressing the conditions that create them. Although Cooperative Extension is well positioned to serve as a catalyst for addressing inequities, doing so will require a shift in how Extension views its work.

To ensure that all people have fair and just opportunities to experience optimal health, the coalitions working on this issue must identify the groups experiencing the most significant barriers to achieving health and work to reduce or eliminate these barriers. This contrasts with “paintbrush approaches” in which communities are viewed as homogeneous in nature and efforts to improve health tend to be one-size-fits-all interventions. Such efforts may incrementally improve the health status of large groups of people but make little or no progress toward closing the health gaps that exist between groups. Unfortunately, precision approaches focused on improving the health of those experiencing the greatest inequities are perceived by some stakeholders as giving preferential treatment to those groups.

One approach for producing both universal and targeted improvements in health outcomes is appropriately referred to as “targeted universalism” (powell et al., 2019). Targeted universalism sets universal goals for the general population that are accomplished through precision approaches tailored to the needs of different groups. Using such a frame, communities would begin by identifying measurable health goals that everyone should be able to achieve. Those communities would then focus on identifying obstacles to achieving those goals, calling attention to the inequities, and committing resources toward closing any gaps that exist.

In Practice. At Oregon State University (OSU), Cooperative Extension’s health-related work is administered through the College of Public Health and Human Sciences. This work has a dual focus on improving the health of individuals and the communities in which they live. A strong equity focus is incorporated into OSU’s goals for both individuals and communities. The work of

community-based faculty and staff aligns directly with these two goals.

OSU used both universal and precision approaches in its response to the COVID-19 pandemic. OSU Extension faculty and staff worked in partnership with the Oregon National Guard, Oregon Department of Agriculture, and Oregon Office of Emergency Management to distribute 915,000 KN95 masks and 5,000 gallons of hand sanitizer across the state of Oregon. But when a COVID-19 hot spot was detected in a seafood packing plant where most of the workers identified as Latino or Indigenous Guatemalan, a precision approach produced a community-supported initiative aimed at helping those workers obtain face coverings, fill out rental assistance forms, navigate the health care system, and purchase groceries while quarantined. Culturally responsive resource materials in both Spanish and Mam (a nonwritten Indigenous Guatemalan language) were developed with and for the affected population. The application of an equity lens was credited as key to the success of the project, beginning with an assessment of who can access health information and, more importantly, who cannot and why.

Integrate Data Science With Resident Voice

One of the most widely used sources of data on health outcomes and the factors that influence health is the County Health Rankings & Roadmaps (CHR&R) resource developed by the University of Wisconsin Population Health Institute with support from RWJF. This resource provides a snapshot of the overall health of the people who reside in a particular county. CHR&R data can catalyze community action, but only when local leaders possess the skills needed to integrate data with resident voice. While data can provide important information about “what is,” resident voice provides information on “why” and “what to do about it.” In short, residents of a community give meaning to the data about that community. CHR&R also provides communities with an array of resources for supporting collective action aimed at improving community health.

While counties are important governmental structures used for social organization and the deployment of resources, they are not homogeneous in their makeup, let alone in the health status of their residents. As a result, health assessments conducted at the county level often lack the granularity needed to identify the communities within that county that are experiencing the poorest health outcomes. In a

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sense, these county-level assessments may actually mask existing health inequities. To ensure that interventions are tailored to the unique needs of communities bearing the greatest health burdens, it is necessary to examine health by census tract or zip code. The CDC's PLACES: Local Data for Better Health allows communities to access health outcome data at the census tract level and actually visualize disparities.

In Practice. In 2018, the Texas A&M AgriLife Extension Service developed a practical resource for local planning groups to use in identifying health issues and focusing their work. The State of Health tool is a two-page infographic that contains data related to health outcomes, risk factors, and contextual influences on the overall health of a region. Measures of health outcomes include diabetes prevalence, cardiovascular deaths, premature mortality, percentage of adults who report being in fair or poor health, and the number of poor mental health days that people reported experiencing in the last month. Risk factors include adult obesity, adult smoking, physical inactivity, and excessive drinking. Contextual factors include measures of the food environment, percentage of uninsured residents, median household income, and percentage of children living in poverty. The infographic shares data in a way that is easy for local communities to understand. Community groups use the information presented through the infographic to make data-informed decisions about where to focus resources.

Cooperative Extension's added focus on health has also helped the Extension Service in Texas attract new resources to support its health focused work. Some of those new resources stemmed from the creation of Healthy South Texas, a targeted effort that partners AgriLife Extension Service and the Texas A&M Health Science Center to provide chronic disease management and prevention programs in 27 South Texas counties. Across the region, Extension agents worked with health coalitions, partners, and residents to plan programs. Thanks to the efforts and the reach of Cooperative Extension, 115,000 adults and youth from these counties participated in the Walk Across Texas physical activity challenge in the first 5 years. Healthy South Texas has been funded by the Texas Legislature since 2015.

The Healthy Texas Institute was established by the Texas A&M University System Board of Regents in 2019 to provide an operational structure for Healthy Texas and foster further collaboration. The

institute has shared leadership from A&M Health Science Center, AgriLife Extension, and AgriLife Research. In January 2021, the Healthy Texas Institute piloted a new evaluation strategy with common measures across Healthy South Texas programs and a custom data collection portal.

Invest in Professionals, Programs, and Initiatives

Cooperative Extension's National Framework for Health and Wellness (Braun et al., 2014) greatly accelerated health's rise in prominence for Cooperative Extension. Perhaps most indicative of health's emergence as a priority has been the increased use of the word "health" in the lexicon of the system. Many state Extension services now name health as a priority in their strategic plans. In some states, units that were previously referred to by historic program area names are reframing their work and adopting unit names that better reflect the inclusion of health-related work.

Cooperative Extension has also started to hire many more individuals with formal training in health-related disciplines. For example, Texas A&M University is recruiting and hiring individuals with educational backgrounds and experience in public health, community health, health promotion, nutrition, and related fields for county-based Cooperative Extension positions. In addition, many land-grant universities are providing professional development opportunities for existing staff that will help them build essential knowledge and skills for expanded work in health. Additionally, an annual National Health Outreach Conference provides Cooperative Extension personnel from across the nation with an opportunity to engage in professional development sessions and to network with others who have similar interests.

Cooperative Extension's efforts to establish health as a systemwide priority have not gone unnoticed by federal agencies and the nonprofit sector. Because many of the 32,000 Cooperative Extension employees are located in field offices and have gained the trust of the people they serve, they are often seen as logical partners for implementing statewide, regional, or national initiatives. In 2014, the Cooperative Extension System received funding from the CDC to work with high-obesity communities to increase access to healthier foods and promote physical activity. Today, 15 states are involved in this program. In 2018 and 2019, Cooperative Extension received funding from the Substance Abuse and Mental Health Services Administration to develop and disseminate training and technical assistance for

rural communities related to opioid issues. Many of these partnerships were enabled by capacity and competitive funding made available by the National Institute of Food and Agriculture.

Additionally, RWJF has provided funding for the Well Connected Communities Initiative, a program jointly run by the National 4-H Council and Cooperative Extension staff. The initiative works to establish local coalitions that can develop and implement action plans to address public health priorities. In addition to supporting coalition building activities in communities across the nation, RWJF is also investing in systems change interventions across the Cooperative Extension System to support its work toward ensuring that all people can be as healthy as they can be. Major advances resulting from this initial investment by RWJF have included the hiring of an Extension health director, identification of institutional contacts for health and well-being at each land-grant institution, and the creation of an online professional community to facilitate collaboration and peer learning among Extension faculty and staff.

In Practice. In 2021, Cooperative Extension became involved in a partnership with the CDC to promote the uptake of COVID-19 vaccines. Because county-based Cooperative Extension staff live and work with the people they serve, they are trusted ambassadors for science-based knowledge and interventions in their communities, and they are well versed in multiple strategies and techniques for promoting behavior change. Through this partnership, 72 land-grant institutions are implementing the CDC's Vaccinate with Confidence program within their respective states and are utilizing community engagement techniques to fine-tune messages for the specific populations they are trying to access. Cooperative Extension's broad network of county-based offices has facilitated the implementation of the Vaccinate with Confidence program in places that it had not previously reached.

Additionally, 24 land-grant institutions were selected to pioneer innovative approaches to promoting vaccines—work that will expand the knowledge base surrounding what strategies are best for promoting vaccine uptake with specific populations. Many of these institutions are also categorized as Historically Black Colleges and Universities. These projects extend beyond simple delivery of science-based information about the vaccines: They are full-fledged community-engaged initiatives that involve local residents in

designing approaches to promoting vaccine uptake that account for local values, norms, and history. In these projects, Cooperative Extension staff back out of their expert roles to become authentic partners in learning, discovery, and solution finding.

Establish Partnerships

Like the 2014 framework, Cooperative Extension's National Framework for Health Equity and Well-Being identified partnership development as key to advancing Cooperative Extension's health-related work and suggested a number of potential partners that Extension might pursue. Cooperative Extension has a long and rich history of engaging in partnerships with schools, government agencies, and various community-based organizations to support the delivery of programs at the local level, but until recently Extension offices had few partnerships with health-related colleges, schools, and departments on their respective campuses. Many partners are looking for mechanisms by which they can better engage with the residents of their state and Cooperative Extension provides them with a ready-made system for doing so.

On some land-grant university campuses, collaborative work between Cooperative Extension and cross-campus partners is already underway. Frequent partners include colleges of public health, nursing, pharmacy, veterinary medicine, social work, medicine, and dentistry. Collaboration between these colleges and Cooperative Extension have helped Cooperative Extension to obtain needed expertise and have given the partner colleges an "off-the-shelf" mechanism for expanding their community engagement portfolio.

Several published works have also emphasized the importance of establishing closer working relationships with the health care community. New models of health extension as described in Dwyer et al. (2017) and Kaufman et al. (2017) advance innovative strategies for Cooperative Extension institutions to partner with academic medical centers and primary care providers. These articles pointed out that Cooperative Extension offers a wealth of research-based programs that can help patients implement the recommendations of physicians and other health care practitioners. Such programs can increase self-efficacy, help people self-manage chronic conditions, and enhance the daily lives of adults as they age. Another study suggested a need to educate practicing physicians and allied health care providers about Cooperative Extension

(Khan et al., 2020) to facilitate future connections between clinical practice and the community.

Cooperative Extension is also interested in working with the institutions that receive Clinical and Translational Science Awards (Gutter et al., 2020; Savaiano et al., 2017) to help scientists accelerate treatment innovations to reach patients sooner.

In Practice. Mississippi State University (MSU) is addressing the shortage of physicians in rural Mississippi through an innovative effort called the Rural Medical and Science Scholars Program (RMSS; Sansing et al., 2019). The program's objective is to increase the number of physicians serving the state by identifying talented and interested rising high school seniors and exposing them to academics and experiences relevant to the life of a family physician. Over the course of the program's tenure, its focus has expanded to include health, science, and other STEM-related careers. Founded in 1998 as the Rural Medical Scholars Program, the program received a name change in 2016 to better represent its broadened scope. RMSS is anchored by for-credit college coursework that introduces students to the broad array of health professions and help them understand the science of public health. The program also includes shadowing experiences, medical school tours, and supplemental workshops to help students discover whether a career in health sciences might be a fit for them. In addition to completing health science college coursework, participants build essential skills in areas that are essential to career success, such as leadership, communication, teamwork, critical thinking, time management, and problem-solving.

To date, 459 scholars have participated in the program, and 70 of the state's 82 counties have sent scholars through the program. Twenty-seven percent of the scholars are students of color, and 63% are female. Approximately 70% of RMSS graduates have gone on to pursue health-related careers: 54 scholars are currently attending or have completed medical school, and 41 scholars are now in residencies or private practice. Numerous testimonials from RMSS alumni have indicated that the program played a key role in their decision to pursue a health- or science-related career.

County-based Extension professionals work directly with public and private schools and home-based school organizations to engage students in the RMSS program, and on-campus faculty members from various MSU departments teach the courses offered in the program. MSU partners

with faculty at the University of Mississippi Medical Center as well as a broad range of practicing health care professionals to lead the experiential learning workshops for participants. Older RMSS alumni also serve as mentors for younger RMSS alumni.

Various offices at MSU provide specialized services to the RMSS scholars that help ensure student success and retention. Financial support for the program is provided by the Office of Rural Health and Primary Care, the CREATE Foundation, the Toyota Wellspring Education Fund, and various local hospitals and rural electric cooperatives.

Utilize Community Development Approaches

In their most general sense, community development approaches help communities mobilize for collective action around issues that are important to residents. Community development work ranges in focus from affordable housing and small business development to recreation and the establishment of cooperatives. The community development process often begins with the creation of a multisector community coalition that brings local residents together with the institutions and organizations that serve them.

Community coalitions that focus on health typically include representatives of health and human service providers who engage with racially and ethnically diverse communities in meaningful and significant ways (Anderson et al., 2015). Individuals with lived experience in these communities will also actively participate. These coalitions differ from interagency councils that include only representatives of organizations that serve a particular neighborhood or group of individuals.

Cooperative Extension staff can play many different roles within community coalitions—including convening, facilitating, managing, supporting, resourcing, and leading—and they may move in and out of different roles as appropriate. Perhaps Extension's most significant role in a coalition is to connect the community to the knowledge and resources of the broader university. But being an effective coalition member involves moving back and forth between being a teacher and a learner, at times serving as a source of expert-based knowledge as well as listening and learning from the other voices at the table.

One group of stakeholders that is frequently overlooked in the creation of local coalitions is the young people who reside in a community. The inclusion of young people in a local coalition not

only adds a unique perspective to the community assessment and planning process but also helps young people gain valuable skills needed for lifelong civic engagement. All three land-grant universities mentioned so far in this article offer programs that involve young people in leading or participating in local efforts to improve population health. The University of Wisconsin and the Ohio State University have also created youth volunteer programs focused on health.

In Practice. The Healthy Texas Youth Ambassador Program uses a peer education approach to address youth health issues such as obesity, distracted driving, and stress management. Peer educators are often more effective messengers than adults because they are viewed as being more in tune with young people's perspectives on health and safety issues (Weisz & Black, 2010; Yip et al., 2015). Ambassadors are required to fulfill 40 hours of service at the local level, and they work directly with county Extension educators to identify local health issues, develop plans to address those issues, and implement programs within their communities. Since 2018, youth ambassadors have proven their worth by contributing over 21,000 hours of service and reaching more than 206,000 Texans.

In Mississippi, Junior Master Wellness Volunteers are improving population health by advancing health literacy and promoting healthy lifestyle choices in the communities where they live. The program is offered by the MSU 4-H Youth Development Program in partnership with the University of Mississippi Medical Center. The program operated as a pilot program in three counties from 2014–2016 and was first offered statewide beginning in 2017 (Moak et al., 2020). Volunteers first learn about the health issue that their cohort will address and then complete a community service project aimed at putting what they learned into practice. Youth service projects have included organizing a physical activity challenge for community members, developing health education messages for public works personnel, promoting dental hygiene to kindergarteners, coordinating health fairs, and promoting various health messages via social media. As of January 2021, 1,239 youth volunteers had reached 71,820 Mississippians through their local efforts.

Embracing the Cooperative Extension Model

In 2007, the University of New Mexico Health Sciences Center (UNM HSC) established a new Office of Community Health to address health

equity issues across New Mexico through a focus on social determinants of health. However, the University of New Mexico (UNM) lacked the community presence of its land-grant partner, New Mexico State University (NMSU), which operated the state's Extension service. Knowing of Cooperative Extension, UNM leaders developed a two-pronged plan of (a) developing a partnership with NMSU to grow the portfolio of health-related work occurring through Cooperative Extension and (b) developing its own network of Health Extension Regional Offices (HEROs).

Early collaborative work between the institutions (Kaufman et al., 2017) resulted in a widespread effort to disseminate information about the New Mexico health insurance exchange through local Extension offices. In return, the UNM HSC helped teach youth enrolled in NMSU's 4-H Youth Development Program about careers in the health sciences.

But it was the rollout of HEROs across the state that increased UNM HSC's capacity to engage in community-based work of its own. HEROs are chosen by and live in the communities they serve. They are usually masters-level professionals with training in a health field relevant to community needs (Kaufman et al., 2019). Their task is to bring UNM's resources to the "front door" of New Mexico communities as they grapple with the root causes of poor health. HEROs' work can range from assisting with the development of food hubs to training tribal elders how to access science-based information on chronic diseases. HEROs also train many community health workers across New Mexico and provide undocumented immigrants with information regarding their rights to services. They routinely collaborate with Cooperative Extension agents, health department staff, county health counsels, and local nonprofits, bringing their own unique set of resources from UNM HSC to the community.

Discussion

While recognized mainly for their contributions to health care in the form of medical education, clinical care, and biomedical research, the nation's colleges and universities can play a critical and cost-effective role in upstream efforts designed to keep people healthy rather than waiting to treat them until they have become ill. Currently, the work of Cooperative Extension focuses on the diffusion of science-based information meant to encourage people to adopt healthy behaviors. But individual behavior

accounts for only a small portion of one's overall health. Dwarfing the role of individual behavior is the context or environment in which people live their lives. In order to influence that context, Cooperative Extension faculty and staff must change the way they go about their work. They are learning to move in and out of their expert roles, at times becoming organizers, facilitators, managers, resource providers, and relationship brokers for collective action aimed at addressing the root causes of health inequity.

Collective action can have a universal or precision focus. While universal health campaigns can produce incremental improvements in various measures of community health, they often do little to remediate the disparities in health outcomes that exist between groups. When universal approaches designed to reach the entire population are coupled with precision approaches that address the needs of those suffering the poorest outcomes, communities can close the gaps that exist between groups while simultaneously improving the health status of all members of a community.

Advances in informatics and data visualization are making it easier than ever to obtain powerful community-level data that help indicate who is thriving or struggling. But community voice, including the perspective of young people, helps give meaning to the data obtained and can help explain why the data are telling a particular story. Colleges and universities possess unique skills in data analysis and group facilitation. Bringing that expertise to communities can supercharge a community's efforts to design precision approaches to serve those who need the greatest assistance in achieving improved health.

Crucially, the community-engaged work of faculty and staff must be supported and rewarded by their institution. Colleges and universities are in various stages of readiness for promoting community-engaged work (Holland, 2001). They still tend to reward laboratory-based discovery and expert-based teaching in annual reviews and faculty promotion processes. Community-engaged institutions, however, have implemented ways of rewarding faculty and staff who engage with communities in the spirit of mutual benefit and reciprocity, which results in the cocreation of knowledge and relevant solutions to pressing health needs.

At the community level, coalitions can bring multiple voices and perspectives to the process of community problem-solving. Moreover, the work of coalitions tends to be more sustainable,

impactful, and better supported than the efforts of any single organization or agency. Effectively addressing complex problems also requires approaches that transcend the boundaries of traditional academic disciplines.

Finally, it is important to recognize that great wisdom lies within communities and their residents. Community development processes surface this hidden expertise in a process of solution finding. These approaches often lie in stark contrast with expert recommendations as to how issues should be addressed.

By implementing the five recommendations of Cooperative Extension's National Framework for Health Equity and Well-Being, higher education can be an effective partner in collective action focused on improving the health of the nation.

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About the Author

Roger Rennekamp works on behalf of the nation's land-grant universities to build capacity and grow visibility of Cooperative Extension's work to advance health equity and well-being. He has held faculty appointments and administrative positions at three different land-grant institutions across more than four decades of service to higher education.

Contributing Authors

David Buys, Mississippi State University

Courtney Dodd, Texas A&M University

Stephen Green, Texas A&M University

Julie Gardner, Texas A&M University

Rusty Hohlt, Texas A&M University

Deborah John, Oregon State University

Arthur Kaufman, University of New Mexico

Roberta Riportella, Oregon State University

Ann Sansing, Mississippi State University

Miquela Smith, Texas A&M University